CLAIMS

1. A method for performing channel configuration of a base station in a cellular radio network, the method comprising:

directing by a controller the base station to transmit a logical control channel on at least one physical channel allowed for the cellular radio network;

directing a fixed receiver box to receive at least one physical channel transmitted by the base station and to measure at least one channel parameter representing the properties of said at least one physical channel;

transmitting a measurement report on the measurements performed by the receiver box to the controller;

selecting by the controller on the basis of at least one measurement report at least one physical channel enabling good range;

directing the base station to use at least one physical channel enabling good range.

2. A method as claimed in claim 1, wherein the receiver box is connected to the controller through a fixed data network.

3. A method as claimed in claim 2, wherein the fixed data network is an IP (Internet protocol) network.

4. A method as claimed in claim 1, wherein the receiver box has its own IP address.

5. A method as claimed in claim 1, wherein the receiver box is connected to the controller through a wireless bi-directional data transmission link.

6. A method as claimed in claim 1, wherein the receiver box is controlled in real time.

7. A method as claimed in claim 1, wherein the receiver box uses one after the other various directed antenna beams in receiving a physical channel to simulate the reception of the physical channel in various geographical locations.

8. A method as claimed in claim 1, wherein the receiver box is capable of receiving physical channels implemented in different ways.

9. A method as claimed in claim 1, wherein the base station uses one after the other various transmission power levels in transmitting a physical channel to improve the accuracy of the range measurement of the physical channel.

10. A method as claimed in claim 1, wherein the channel configuration is performed when building the cellular radio network.

11. A method as claimed in claim 1, wherein the channel configuration is performed at regular intervals.

12. A method as claimed in claim 1, wherein the base station forms a pico cell or a micro cell.

13. A method as claimed in claim 12, wherein the base station is an office base station.

14. A method as claimed in claim 1, wherein the base station forms a macro cell.

15. A method as claimed in claim 1, wherein the channel configuration of all base stations of the cellular radio network is performed on all base stations simultaneously according to a preliminary channel configuration plan made by the controller.

16. A method as claimed in claim 1, wherein the physical channel is a time-slot of a radio frequency, and the logical control channel is directed to be transmitted at its time through each time-slot of said frequency.

17. A method as claimed in claim 1, wherein the logical control channel is a BCCH (broadcast control channel).

18. A method as claimed in claim 1, wherein the receiver box is placed in the home, office or business premises of the user of the cellular radio network.

19. A network element of a cellular radio network, comprising:

at least one base station;

a controller controlling the base station; and

at least one fixed receiver box which comprises means for receiving control commands from the controller, means for measuring at least one channel parameter representing the properties of at least one physical channel transmitted by the base station, and means for transmitting a measurement report on measurements performed by the receiver box to the controller, and

the controller comprises means for directing the base station to transmit a logical control channel on at least one physical channel allowed for the cellular radio network, means for directing the fixed receiver box to receive at least one physical channel transmitted by the base station, means for selecting on the basis of at least one measurement report at least one physical channel enabling good range, and means for directing the base station to use at least one physical channel enabling good range.

20. A network element as claimed in claim 19, wherein the receiver box comprises means for establishing a data transmission link to the controller through a fixed data network.

21. A network element as claimed in claim 20, wherein the fixed data network is an IP (Internet protocol) network.

22. A network element as claimed in claim 21, wherein the receiver box has its own IP address.

23. A network element as claimed in claim 19, wherein the receiver box is connected to the controller through a wireless bi-directional data transmission link.

24. A network element as claimed in claim 19, wherein the means of the receiver box for receiving control commands from the controller receive them in real-time.

25. A network element as claimed in claim 19, wherein the receiver box comprises means to implement a directed antenna beam in reception, and means for using one after the other various directed antenna beams in receiving a physical channel to simulate the reception of the physical channel in various geographical locations.

26. A network element as claimed in claim 19, wherein the receiver box comprises means for receiving physical channels implemented in different ways.

27. A network element as claimed in claim 19, wherein the controller comprises means for directing the base station to use one after the other various transmission power levels in transmitting a physical channel to improve the accuracy of the range measurement of the physical channel.

28. A network element as claimed in claim 19, wherein the channel configuration of the base station is performed when building the cellular radio network.

29. A network element as claimed in claim 19, wherein the channel configuration of the base station is performed at regular intervals.

30. A network element as claimed in claim 19, wherein the base station forms a pico cell or a micro cell.

31. A network element as claimed in claim 30, wherein the base station is an office base station.

32. A network element as claimed in claim 19, wherein the base station forms a macro cell.

33. A network element as claimed in claim 19, wherein the channel configuration of all base stations in the cellular radio network is performed on all base stations simultaneously according to a preliminary channel configuration plan made by the controller.

34. A network element as claimed in claim 19, wherein the physical channel is a time-slot of a radio frequency, and the logical control channel is directed to be transmitted at its time through each time-slot of said frequency.

35. A network element as claimed in claim 19, wherein the logical control channel is a BCCH (broadcast control channel).

36. A network element as claimed in claim 19, wherein the receiver box is placed in the home, office or business premises of the user of the cellular radio network.